

Title (en)

Magnetic pulse-assisted casting of metal alloys and metal alloys produced thereby

Title (de)

Magnetpulsgestütztes Gießen von Metalllegierungen und damit hergestellte Metalllegierungen

Title (fr)

Coulée assistée par impulsion magnétique pour alliages métalliques et alliages métalliques produits selon ce procédé

Publication

EP 1932931 A2 20080618 (EN)

Application

EP 07122284 A 20071204

Priority

- US 87293706 P 20061204
- US 95019707 A 20071204

Abstract (en)

A method of forming a cast metal alloy comprises providing a molten ferromagnetic metal alloy; utilizing AC or DC electrical power to generate a pulsed or oscillating magnetic field within the interior space of a casting mold via a magnetic core assembly surrounding the casting mold; filling the casting mold with the molten metal alloy; applying the pulsed or oscillating magnetic field to the molten metal alloy during solidification to mix a molten portion of the solidifying body; and continuing applying the pulsed or oscillating magnetic field to the solidifying body until complete solidification is achieved. The method has particular utility in the formation of cast ferromagnetic alloys for use as high PTF sputtering targets having improved microstructural features.

IPC 8 full level

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CPC (source: EP KR US)

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Cited by

CN104399951A; CN105583382A

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Designated extension state (EPC)

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